

FY2011 Tochigi Prefecture Survey Results

[Survey Dates]

Survey	Rivers	Lakes	Sea Areas	Bathing Areas
1 st Time	Oct. 5-23, 2011	Oct. 13-24, 2011	—	—
2 nd Time	Feb. 20-29, 2012	Feb. 27-29, 2012	—	—

[Survey Results]

1st Time:

Water Quality (Lower detection limit: 1 Bq/L)

- Radioactive iodine (I-131) was not detectable at any of the locations tested.
- Radioactive cesium (Cs-134, Cs-137)

Rivers: Detected at one location (Cs-134: ND, Cs-137: 1 Bq/L)

Lakes: Not detectable at any location

Sediment

- Radioactive iodine (I-131) was not detectable at any of the locations tested (Lower detection limit: 30 Bq/kg (dried mud))

- Radioactive cesium

Rivers

Cs-134: ND-2,200 Bq/kg (dried mud)

(Lower detection limit: 10 Bq/kg (dried mud))

Cs-137: ND-2,700 Bq/kg (dried mud)

(Lower detection limit: 10 Bq/kg (dried mud))

Lakes

Cs-134: ND-1,900 Bq/kg (dried mud)

(Lower detection limit: 10 Bq/kg (dried mud))

Cs-137: ND-2,500 Bq/kg (dried mud)

(Lower detection limit: 10 Bq/kg (dried mud))

Surrounding Environment

- Radioactive iodine (I-131) was not detectable at any of the locations tested. (Lower detection limit: 30 Bq/kg (dry))

- Radioactive cesium

Rivers

Cs-134: ND-7,600 Bq/kg (dry) (Lower detection limit: 10 Bq/kg (dry))

Cs-137: 11-9,400 Bq/kg (dry)

Lakes

Cs-134: 110-1,500 Bq/kg (dry)

Cs-137: 150-1,900 Bq/kg (dry)

- Spatial Dose

Rivers 0.05-1.05 μSv/h

Lakes 0.09-0.74 μSv/h

2nd Time:

Water Quality (Lower detection limit: 1 Bq/L)

- Radioactive iodine (I-131) was not detectable at any of the locations tested.
- Radioactive cesium (Cs-134, Cs-137) was not detectable at any of the locations tested

Sediment

- Radioactive iodine (I-131) was not detectable at any of the locations tested (Lower detection limit: 30 Bq/kg (dried mud))

- Radioactive cesium

Rivers

Cs-134: ND-990 Bq/kg (dried mud) (Lower detection limit: 10Bq/kg (dried mud))

Cs-137: ND-1,300 Bq/kg (dried mud) (Lower detection limit: 10Bq/kg (dried mud))

Lakes

Cs-134: 66-2,800 Bq/kg (dried mud)

Cs-137: 110-3,900 Bq/kg (dried mud)

Surrounding Environment

- Radioactive iodine (I-131) was not detectable at any of the locations tested. (Lower detection limit: 30Bq/kg (dry))

- Radioactive cesium

Rivers

Cs-134: 11-7,500 Bq/kg (dry)

Cs-137: 21-10,000 Bq/kg (dry)

Lakes

Cs-134: 1,900-5,400 Bq/ kg (dry)

Cs-137: 2,700-7,400 Bq/ kg (dry)

- Spatial Dose

Rivers 0.08-0.76 μ Sv/h

Lakes 0.25-0.50 μ Sv/h

River-2: 1st Water Quality Monitoring Results

No.	Sampling point			Sampling date	Weather	Air temperature	Full depth m	Water quality												
	Water body	Point	Municipality					General items							Radioactive material concentrations (Bq/L)					
								Water temperature	Sampling depth m	Color	Odor	Transparency cm	Electrical conductivity mS/m	SS mg/L	Turbidity	Radioactive cesium	Cs-134	Cs-137		
61	Tonegawa River	Nishiniregawa River	Takeibashi Bridge	Oyamashi City	2011/10/13	Cloudy	17.4	0.43	18.1	0.0	Colorless transparent	None	100 or more	33.5	7	7.8	<1	<1	<1	
62		Okawa River	Prefectural Route Akenomamada-sen	Oyamashi City	2011/10/13	Cloudy	20.0	0.33	20.3	0.0	Colorless transparent	None	100 or more	27.6	6	6.4	<1	<1	<1	
63		Miyatogawa River	Kawadabashi Bridge	Nogimachi Town	2011/10/13	Cloudy	22.1	0.28	19.5	0.0	Colorless transparent	None	100 or more	26.8	8	8.5	<1	<1	<1	
64		Omoigawa River	Shinkawa River	Chuojoishiko, west	Usunomiyashi City	2011/10/7	Clear	20.2	0.30	17.0	0.0	Colorless transparent	None	100 or more	20.1	3	2.7	<1	<1	<1
65			Shinkawa River	Kokujinashi	Usunomiyashi City	2011/10/7	Sunny	25.3	0.15	18.8	0.0	Colorless transparent	None	100 or more	21.2	5	5.9	<1	<1	<1
66			Sugatagawa River	Koshijibashi Bridge	Usunomiyashi City	2011/10/15	Rain	19.8	0.28	17.5	0.0	Colorless transparent	None	100 or more	12.7	8	7.9	<1	<1	<1
67			Yoroigawa River	Nomanjinishi	Usunomiyashi City	2011/10/15	Rain	19.6	0.20	17.0	0.0	Colorless transparent	None	100 or more	19.6	14	6.8	<1	<1	<1
68			Akagawa River	Underneath the highway	Usunomiyashi City	2011/10/14	Cloudy	22.7	0.50	19.3	0.0	Colorless transparent	None	100 or more	14.3	4	3.2	<1	<1	<1
69			Sugatagawa River	Kanumakaido Highway	Usunomiyashi City	2011/10/14	Sunny	22.9	0.43	19.2	0.0	Colorless transparent	None	100 or more	17.1	9	6.2	<1	<1	<1
70			Takeshigawa River	Nakamachibashi Bridge	Usunomiyashi City	2011/10/14	Sunny	24.4	0.47	17.5	0.0	Colorless transparent	None	100 or more	14.6	2	2.2	<1	<1	<1
71	Sugatagawa River		Yodobashi Bridge	Usunomiyashi City	2011/10/14	Clear	22.6	0.15	17.2	0.0	Dark grayish yellow-green	None	100 or more	18.4	4	3.8	<1	<1	<1	
72	Sugatagawa River		Miyamaebashi Bridge	Shimotsukashi City	2011/10/15	Cloudy	20.4	0.53	18.9	0.0	Colorless transparent	None	100 or more	19.5	5	4.8	<1	<1	<1	
73	Kurokawa River		Kaijimabashi Bridge	Kanumashi City	2011/10/15	Cloudy	21.2	0.45	17.8	0.0	Colorless transparent	None	100 or more	8.6	1	2.4	<1	<1	<1	
74	Kurokawa River	Onaribashi Bridge	Mibumashi Town	2011/10/15	Rain	19.6	0.20	18.4	0.0	Colorless transparent	None	100 or more	15.7	5	3.6	<1	<1	<1		
75	Oashigawa River	Akaishibashi Bridge	Kanumashi City	2011/10/14	Cloudy	21.8	0.50	18.8	0.0	Colorless transparent	None	100 or more	6.9	1	0.8	<1	<1	<1		
76	Koyabugawa River	Koyabubashi Bridge	Kanumashi City	2011/10/15	Rain	20.2	0.60	17.8	0.0	Colorless transparent	None	100 or more	13.4	3	3.4	<1	<1	<1		
77	Omoigawa River	Tamotsubashi Bridge	Tochigashi City	2011/10/15	Rain	19.6	0.22	17.8	0.0	Colorless transparent	None	100 or more	10.8	5	3.1	<1	<1	<1		
78	Omoigawa River	Oyamaohashi Bridge	Oyamashi City	2011/10/15	Cloudy	21.1	0.18	19.6	0.0	Colorless transparent	None	100 or more	20.8	8	6.1	<1	<1	<1		
79	Omoigawa River	Otomeohashi Bridge	Oyamashi City	2011/10/13	Cloudy	22.1	0.28	19.8	0.0	Colorless transparent	None	100 or more	17.3	6	4.5	<1	<1	<1		
80	Uzumagawa River	Haranohashi Bridge	Tochigashi City	2011/10/10	Sunny	25.6	0.60	21.2	0.0	Colorless transparent	Faint sewage	100 or more	19.3	8	4.2	<1	<1	<1		
81	Uzumagawa River	Azumabashi Bridge	Tochigashi City	2011/10/11	Cloudy	21.8	0.80	19.8	0.0	Colorless transparent	None	100 or more	21.8	4	4.2	<1	<1	<1		
82	Naganogawa River	Hoshinobashi Bridge	Tochigashi City	2011/10/14	Cloudy	21.1	0.40	18.4	0.0	Colorless transparent	None	100 or more	9.5	1	0.8	<1	<1	<1		
83	Naganogawa River	Oiwabashi Bridge	Tochigashi City	2011/10/11	Sunny	24.8	0.20	17.2	0.0	Colorless transparent	None	100 or more	22.5	1	1.5	<1	<1	<1		
84	Naganogawa River	Ochiaibashi Bridge (tributary)	Oyamashi City	2011/10/11	Cloudy	18.2	0.60	16.8	0.0	Colorless transparent	None	100 or more	21.0	1	2.1	<1	<1	<1		
85	Uzumagawa River	Uzumabashi Bridge	Tochigashi City	2011/10/13	Cloudy	21.6	1.00	19.0	0.0	Colorless transparent	Faint seaweed	100 or more	25.4	6	4.1	<1	<1	<1		
86	Mikouchigawa River	Tributary	Nikkoshi City	2011/10/17	Cloudy	15.2	1.47	14.2	0.0	Colorless transparent	None	100 or more	10.7	<1	0.3	<1	<1	<1		
87	Watarasegawa River	Watarasegawa River intake weir at Sori Power Station	Nikkoshi City	2011/10/17	Cloudy	17.2	0.28	14.8	0.0	Colorless transparent	None	100 or more	25.5	<1	0.6	<1	<1	<1		
88	Omatagawa River	Shinkaminobashi Bridge	Ashikagashi City	2011/10/10	Clear	23.6	0.35	19.0	0.0	Colorless transparent	None	100 or more	31.8	4	4.4	<1	<1	<1		
89	Omatagawa River	Tributary	Ashikagashi City	2011/10/10	Clear	24.0	0.40	20.2	0.0	Colorless transparent	None	100 or more	17.9	5	4.5	<1	<1	<1		
90	Watarasegawa River	Hajikabashi Bridge	Ashikagashi City	2011/10/10	Clear	25.4	0.43	20.3	0.0	Colorless transparent	None	100 or more	13.5	1	1.8	<1	<1	<1		
91	Matsudagawa River	Shinmatsudagawabashi Bridge	Ashikagashi City	2011/10/10	Sunny	23.1	0.38	21.5	0.0	Colorless transparent	None	100 or more	12.5	3	3.7	<1	<1	<1		
92	Matsudagawa River	Tributary	Ashikagashi City	2011/10/11	Cloudy	20.8	0.19	20.8	0.0	Colorless transparent	None	100 or more	18.1	3	3.8	<1	<1	<1		
93	Rendanjigawa River	Tributary	Ashikagashi City	2011/10/11	Sunny	22.0	0.18	20.2	0.0	Colorless transparent	None	100 or more	22.2	4	3.8	<1	<1	<1		
94	Watarasegawa River	Nakabashi Bridge	Ashikagashi City	2011/10/11	Clear	18.6	0.23	17.3	0.0	Colorless transparent	None	100 or more	14.1	1	1.7	<1	<1	<1		
95	Fukurogawa River	Sukedo	Ashikagashi City	2011/10/11	Sunny	19.5	0.29	19.1	0.0	Colorless transparent	None	100 or more	19.3	5	4.7	<1	<1	<1		
96	Fukurogawa River	Fukurogawa Floodgate (tributary)	Ashikagashi City	2011/10/8	Clear	17.4	0.60	17.5	0.0	Colorless transparent	Faint sewage	100 or more	35.8	8	7.3	<1	<1	<1		
97	Hatagawa River	Takadabashi Bridge	Sanoshi City	2011/10/8	Clear	21.2	0.30	17.0	0.0	Colorless transparent	None	100 or more	16.6	3	2.5	<1	<1	<1		
98	Izurugawa River	Tributary	Ashikagashi City	2011/10/8	Clear	22.2	1.10	18.0	0.0	Yellow green	None	100 or more	24.4	3	3.7	<1	<1	<1		
99	Hatagawa River	Tributary	Ashikagashi City	2011/10/8	Sunny	17.4	1.20	16.8	0.0	Yellow green	None	100 or more	19.4	4	4.2	<1	<1	<1		
100	Yabagawa River	Yabagawa Floodgate (tributary)	Ashikagashi City	2011/10/10	Sunny	22.6	2.10	20.8	0.0	Dark grayish yellow-green	Faint sewage	60	26.4	5	6.3	<1	<1	<1		
101	Watarasegawa River	Wataraseohashi Bridge	Fatebayashi City	2011/10/10	Sunny	18.6	0.38	19.7	0.0	Colorless transparent	Faint sewage	100 or more	18.8	2	3.2	<1	<1	<1		
102	Saikawa River	Tributary	Sanoshi City	2011/10/10	Sunny	19.9	0.60	18.8	0.0	Colorless transparent	Faint sewage	60	20.3	11	1.1	<1	<1	<1		
103	Akiyamagawa River	Koyabashi Bridge (Semba)	Sanoshi City	2011/10/14	Sunny	20.8	0.80	17.8	0.0	Colorless transparent	None	100 or more	11.1	<1	0.6	<1	<1	<1		
104	Akiyamagawa River	Horigomebashi Bridge	Sanoshi City	2011/10/14	Clear	20.8	0.30	19.0	0.0	Colorless transparent	None	100 or more	28.3	<1	0.4	<1	<1	<1		
105	Akiyamagawa River	Tributary	Sanoshi City	2011/10/10	Cloudy	18.0	0.80	18.6	0.0	Colorless transparent	Faint sewage	100 or more	29.2	2	1.4	<1	<1	<1		
106	Misugigawa River	Tributary	Sanoshi City	2011/10/14	Clear	18.4	0.40	17.0	0.0	Colorless transparent	None	100 or more	38.6	8	8.5	<1	<1	<1		
107	Watarasegawa River	Shinkaibashi Bridge	Tochigashi City	2011/10/13	Cloudy	20.6	0.30	20.2	0.0	Colorless transparent	None	100 or more	25.0	5	5.6	<1	<1	<1		

Note: Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

River-2: 1st Surrounding Environment (River Terrace (Left Bank)) Monitoring Results

No.	Sampling point			Sampling date	Weather	Air temperature	Surrounding environment (soil/herb/air dose)										Remarks		
							Left bank					Herb						Air dose (μSv/h)	
							Soil			Concentration of radioactive material (Bq/kg)		Concentration of radioactive material (Bq/kg)		Concentration of radioactive cesium		Concentration of radioactive cesium			
							Color	Odor	Property	Radioactive iodine-131	Radioactive cesium	Radioactive iodine-131	Radioactive cesium	Radioactive cesium	Radioactive cesium				
61	Tonegawa River System	Watarasegawa River System	Nishiniregawa River	Lakebashi Bridge	Oyamashi City	2011/10/13	Cloudy	17.4	None	Loamv	<30	240	330	<30	<10	<10	0.07		
62			Okawa River	Okawa River	Oyamashi City	2011/10/13	Cloudy	20.0	None	Loamv	<30	290	390	<30	<10	<10	0.06		
63			Mivatogawa River	Kawadabashi Bridge	Nogamachi Town	2011/10/13	Cloudy	22.1	Brown/black	Earth	Loamv	<30	120	160	<30	<10	<10	0.07	
64			Shinkawa River	Chuooshiko, west	Utsunomyashi City	2011/10/7	Clear	20.2	—	—	—	—	—	—	—	—	—	0.07	
65			Shinkawa River	Kokutaniishi	Utsunomyashi City	2011/10/7	Sunny	25.3	—	—	—	—	—	—	<30	<10	<10	0.10	
66			Sigatagawa River	Koshimbashi Bridge	Utsunomyashi City	2011/10/13	Rain	19.8	Brown/black	Faint earth	Loamv	<30	110	140	<30	<10	<10	0.17	
67			Yonegawa River	Nomamishi	Utsunomyashi City	2011/10/13	Rain	19.6	Black	Faint earth	Loamv	<30	40	50	<30	<10	<10	0.14	
68			Akagawa River	Underneath the highway	Utsunomyashi City	2011/10/14	Cloudy	22.7	Brown/black	Faint green grass	Loamv	<30	100	130	<30	<10	<10	0.08	
69			Sigatagawa River	Kanumakado Highway	Utsunomyashi City	2011/10/14	Sunny	22.9	Brown/black	None	Loamv	<30	120	160	<30	<10	<10	0.11	
70			Tachigawa River	Nakamachibashi Bridge	Utsunomyashi City	2011/10/14	Sunny	24.4	Dark brown	None	Loamv	<30	210	250	<30	<10	<10	0.09	
71			Sigatagawa River	Yodobashi Bridge	Utsunomyashi City	2011/10/14	Clear	22.6	Brown/black	Faint earth	Loamv	<30	130	170	<30	<10	<10	0.10	
72			Sigatagawa River	Miyamaebashi Bridge	Shimotsukeshi City	2011/10/15	Cloudy	20.4	Brown/black	None	Loamv	<30	130	190	<30	<10	<10	0.07	
73			Kanumasa River	Kanumabashi Bridge	Kanumasa City	2011/10/15	Cloudy	21.2	Brown/black	None	Clay-loamv	<30	290	390	<30	16	22	0.18	
74			Kanumasa River	Onariyabashi Bridge	Mifunagashi Town	2011/10/15	Rain	19.6	Black	None	Clay-loamv	<30	220	300	<30	2	18	0.12	
75			Chibugawa River	Akashibashi Bridge	Kanumasa City	2011/10/14	Cloudy	21.8	Brown/black	Earth	Clay-loamv	<30	250	270	<30	<10	<10	0.21	
76			Chibugawa River	Kovabubashi Bridge	Kanumasa City	2011/10/15	Rain	20.2	Brown/black	Earth	Clay-loamv	<30	180	230	<30	<10	<10	0.18	
77			Chibugawa River	Lamotsubashi Bridge	Tochigashi City	2011/10/15	Rain	19.6	Brown/black	Faint green grass	Loamv	<30	110	100	<30	<10	<10	0.10	
78			Chibugawa River	Ovamaobashi Bridge	Oyamashi City	2011/10/15	Cloudy	21.1	Brown/black	None	Loamv	<30	140	160	<30	<10	<10	0.11	
79			Chibugawa River	Otoomeobashi Bridge	Oyamashi City	2011/10/13	Cloudy	22.1	Dark brown	Earth	Loamv	<30	300	360	<30	<10	<10	0.12	
80			Chibugawa River	Haranobashi Bridge	Tochigashi City	2011/10/11	Sunny	25.6	Brown/black	Earth	Loamv	<30	130	200	<30	<10	<10	0.08	
81			Chibugawa River	Azumabashi Bridge	Tochigashi City	2011/10/11	Cloudy	21.8	Brown/black	Earth	Loamv	<30	70	90	<30	<10	<10	0.08	
82			Chibugawa River	Hoshinobashi Bridge	Tochigashi City	2011/10/14	Cloudy	21.1	Brown/black	Earth	Clay-loamv	<30	250	300	<30	4	5	0.20	
83			Chibugawa River	Oiwabashi Bridge	Tochigashi City	2011/10/11	Sunny	24.8	Dark brown	Earth	Loamv	<30	170	230	<30	<10	<10	0.10	
84			Chibugawa River	Ochiabashi Bridge (tributary)	Oyamashi City	2011/10/11	Cloudy	18.2	Dark brown	Earth	Clay-loamv	<30	180	200	<30	13	13	0.12	
85			Chibugawa River	Uzumabashi Bridge	Tochigashi City	2011/10/13	Cloudy	21.6	Dark brown	Earth	Clay-loamv	<30	210	280	<30	31	33	0.21	
86			Chibugawa River	Tributary	Nikkoshi City	2011/10/17	Cloudy	15.2	—	—	—	—	—	—	—	—	—	0.54	
87			Chibugawa River	Watarasegawa River intake weir at Son Power Station	Nikkoshi City	2011/10/17	Cloudy	17.2	—	—	—	—	—	—	<30	400	470	0.52	
88			Chibugawa River	Shinkaminodabashi Bridge	Ashikagashi City	2011/10/10	Clear	24.6	Brown/black	Earth	Loamv	<30	290	290	<30	<10	<10	0.13	
89			Chibugawa River	Tributary	Ashikagashi City	2011/10/10	Clear	24.6	Dark brown	Earth	Loamv	<30	110	130	<30	5	7	0.17	
90			Chibugawa River	Hankabashi Bridge	Ashikagashi City	2011/10/10	Clear	25.4	Brown/black	Earth	Loamv	<30	170	240	<30	13	14	0.14	
91			Chibugawa River	Shimatsudagawabashi Bridge	Ashikagashi City	2011/10/10	Sunny	23.1	Brown/black	Earth	Clay-loamv	<30	230	270	<30	<10	13	0.15	
92			Chibugawa River	Tributary	Ashikagashi City	2011/10/11	Cloudy	20.8	Dark brown	Earth	Loamv	<30	100	150	<30	<10	<10	0.17	
93			Chibugawa River	Tributary	Ashikagashi City	2011/10/11	Sunny	22.0	Brown/black	Faint mold	Clay-loamv	<30	240	310	<30	<10	<10	0.15	
94			Chibugawa River	Nakabashi Bridge	Ashikagashi City	2011/10/11	Clear	18.6	Dark brown	Earth	Loamv	<30	930	1,000	<30	<10	<10	0.14	
95			Chibugawa River	Nukedo	Ashikagashi City	2011/10/11	Sunny	19.5	Brown/black	Earth	Loamv	<30	140	180	<30	<10	<10	0.13	
96			Chibugawa River	Nukogawa Floodgate (tributary)	Ashikagashi City	2011/10/8	Clear	17.4	Brown/black	None	Loamv	<30	360	460	<30	<10	<10	0.10	
97			Chibugawa River	Lakadabashi Bridge	Sanoshi City	2011/10/8	Clear	21.2	Brown/black	None	Loamv	<30	95	120	<30	<10	<10	0.09	
98			Chibugawa River	Tributary	Ashikagashi City	2011/10/8	Clear	22.2	Brown/black	None	Loamv	<30	79	79	<30	<10	<10	0.08	
99			Chibugawa River	Tributary	Ashikagashi City	2011/10/8	Sunny	17.4	Black	None	Loamv	<30	73	92	<30	<10	<10	0.10	
100			Chibugawa River	Yabagawa Floodgate (tributary)	Ashikagashi City	2011/10/10	Sunny	22.6	Brown/black	Earth	Loamv	<30	180	220	<30	<10	<10	0.06	
101			Chibugawa River	Wataraseobashi Bridge	Fatebayaobashi City	2011/10/10	Sunny	18.6	Brown/black	Earth	Loamv	<30	58	88	<30	<10	<10	0.07	
102			Chikawa River	Tributary	Sanoshi City	2011/10/10	Sunny	19.9	Dark brown	Earth	Loamv	<30	33	36	<30	<10	<10	0.07	
103			Chibugawa River	Koyabashi Bridge (Sembai)	Sanoshi City	2011/10/14	Sunny	20.8	Dark brown	Earth	Loamv	<30	570	640	<30	<10	<10	0.19	
104			Chibugawa River	Horigomebashi Bridge	Sanoshi City	2011/10/14	Clear	20.8	Dark brown	Earth	Loamv	<30	490	590	<30	<10	<10	0.17	
105			Chibugawa River	Tributary	Sanoshi City	2011/10/10	Cloudy	18.0	Brown/black	Earth	Loamv	<30	350	480	<30	<10	<10	0.07	
106			Chibugawa River	Tributary	Sanoshi City	2011/10/14	Clear	18.4	Dark brown	Earth	Loamv	<30	150	160	<30	<10	<10	0.21	
107			Chibugawa River	Watarasegawa Shinkabashi Bridge	Tochigashi City	2011/10/13	Cloudy	20.6	Brown	Earth	Clay-loamv	<30	340	420	<30	<10	<10	0.20	

Note: * Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd. For points with *1 in the Remarks column, a survey meter, Model 3 of Ludlum Measurement Inc., and for those with *2, a Model 5000 of Health Physics Instruments was used.

Figures measured with either a Model 3 or a Model 5000 had a tendency to be a little higher than those measured with a TCS-172 or TCS-161 (about 1.6 times higher).

* Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

River-2: 1st Surrounding Environment (River Terrace (Right Bank)) Monitoring Results

Sampling point				Sampling date	Weather	Air temperature	Surrounding environment (soil/herb/air dose)										Remarks	
No.	Water body	Point	Municipality				Soil			Herb			Air dose (μSv/h)					
				Color	Odor	Property	Concentration of radioactive material (Bq/kg) <small>Radionuclide: Cs-134, Cs-137</small>	Concentration of radioactive material (Bq/kg) <small>Radionuclide: Cs-134, Cs-137</small>	Concentration of radioactive material (Bq/kg) <small>Radionuclide: Cs-134, Cs-137</small>									
61	Tonegawa River	Nishiniregawa River	Lakebashi Bridge	Oyamashi City	2011/10/13	Cloudy	17.4	Dark brown	None	Loamy	<30	160	240	<30	<10	<10	0.06	
62		Okawa River	Prefectural Route Akenomamada-sen	Oyamashi City	2011/10/13	Cloudy	20.0	Dark brown	None	Loamy	<30	100	120	<30	<10	<10	0.06	
63		Miyatogawa River	Kawadabashi Bridge	Nagamachi Town	2011/10/13	Cloudy	22.1	Brown/black	None	Loamy	<30	180	200	<30	<10	<10	0.07	
64		Shinkawa River	Chuoroshiko, west	Utsunomyashi City	2011/10/7	Clear	20.2	Black	None	Loamy	<30	92	82	<30	120	170	0.06	
65		Shinkawa River	Kokutaishi	Utsunomyashi City	2011/10/7	Sunny	25.3	—	—	—	—	—	—	—	—	—	0.08	Unable to collect sediment due to bottom being concrete laid. For surrounding environment (soil/herb/air dose), unable to collect soil due to no exposed soil.
66		Sagayama River	Koshimbashi Bridge	Utsunomyashi City	2011/10/13	Rain	19.8	Brown/black	Faint earth	Loamy	<30	130	160	<30	38	39	0.18	*1
67		Yotogawa River	Nomamishi	Utsunomyashi City	2011/10/13	Rain	19.6	Black	Faint earth	Loamy	<30	78	87	<30	<10	<10	0.12	*1
68		Akagawa River	Underneath the highway	Utsunomyashi City	2011/10/14	Cloudy	22.7	Dark brown	Faint green grass	Sandy	<30	120	180	<30	<10	<10	0.07	*1
69		Sagayama River	Kanumakado Highway	Utsunomyashi City	2011/10/14	Sunny	22.9	Brown/black	None	Loamy	<30	74	96	<30	<10	<10	0.09	
70		Fuchigawa River	Nakamachibashi Bridge	Utsunomyashi City	2011/10/14	Sunny	24.4	Olive black	None	Loamy	<30	330	400	<30	<10	<10	0.10	
71	Sagayama River	Yodobashi Bridge	Utsunomyashi City	2011/10/14	Clear	22.6	Brown/black	None	Loamy	<30	260	340	<30	<10	<10	0.10		
72	Sagayama River	Miyamaebashi Bridge	Shimotakeshi City	2011/10/15	Cloudy	20.4	Dark brown	None	Clay-loamy	<30	130	160	<30	<10	<10	0.09		
73	Kanuma River	Kanumabashi Bridge	Kanumashi City	2011/10/15	Cloudy	21.2	Brown/black	None	Clay-loamy	<30	240	300	<30	<10	<10	0.17	*2	
74	Kanuma River	Onariashi Bridge	Mifunomachi Town	2011/10/15	Rain	19.6	Brown/black	None	Loamy	<30	<10	11	<30	<10	<10	0.10		
75	Obayama River	Akashiashi Bridge	Kanumashi City	2011/10/14	Cloudy	21.8	Dark olive brown	Earth	Clay-loamy	<30	300	350	<30	<10	11	0.21	*2	
76	Koyabashi River	Kovabashi Bridge	Kanumashi City	2011/10/15	Rain	20.2	Brown/black	Earth	Clay-loamy	<30	1,100	1,300	<30	<10	<10	0.20	*2	
77	Obayama River	Lamotsubashi Bridge	Tochigashi City	2011/10/15	Rain	19.6	Olive brown	Earth	Loamy	<30	160	220	<30	<10	<10	0.10		
78	Obayama River	Ovamaobashi Bridge	Oyamashi City	2011/10/15	Cloudy	21.1	Brown/black	Faint green grass	Loamy	<30	78	37	<30	35	37	0.09		
79	Obayama River	Otoneobashi Bridge	Oyamashi City	2011/10/13	Cloudy	22.1	Dark olive brown	None	Loamy	<30	100	140	<30	<10	11	0.10		
80	Sagayama River	Haranobashi Bridge	Tochigashi City	2011/10/10	Sunny	25.6	Brown/black	Earth	Loamy	<30	340	460	<30	<10	<10	0.08		
81	Obayama River	Azumabashi Bridge	Tochigashi City	2011/10/11	Cloudy	21.8	Brown/black	Earth	Loamy	<30	35	140	<30	<10	<10	0.10		
82	Sagayama River	Hoshinobashi Bridge	Tochigashi City	2011/10/14	Cloudy	21.1	Brown/black	Earth	Clay-loamy	<30	840	990	<30	37	71	0.20	*2	
83	Sagayama River	Oiwabashi Bridge	Tochigashi City	2011/10/11	Sunny	24.8	Brown/black	Earth	Loamy	<30	330	400	<30	14	14	0.10		
84	Sagayama River	Ochiabashi Bridge (tributary)	Oyamashi City	2011/10/11	Cloudy	18.2	Brown	Earth	Loamy	<30	150	170	<30	<10	<10	0.09		
85	Sagayama River	Uzumabashi Bridge	Tochigashi City	2011/10/13	Cloudy	21.6	Dark olive brown	Earth	Clay-loamy	<30	220	260	<30	<10	<10	0.19	*2	
86	Mitsugawa River	Tributary	Nikkoshi City	2011/10/17	Cloudy	15.2	—	—	—	—	—	—	—	—	—	0.48	Unable to collect sediment due to bottom being concrete laid. For surrounding environment (soil/herb/air dose), unable to collect soil due to no exposed soil. *1	
87	Watarasegawa River	Watarasegawa River intake weir at Son Power Station	Nikkoshi City	2011/10/17	Cloudy	17.2	Brown/black	None	Sandy	<30	34	40	<30	600	760	0.50	*1	
88	Watarasegawa River	Shinkaminodabashi Bridge	Ashikagashi City	2011/10/10	Clear	24.6	Brown/black	Earth	Loamy	<30	280	340	<30	<10	<10	0.13	*2	
89	Watarasegawa River	Tributary	Ashikagashi City	2011/10/10	Clear	24.0	Black	Earth	Loamy	<30	120	160	<30	74	25	0.17	*2	
90	Watarasegawa River	Hankabashi Bridge	Ashikagashi City	2011/10/10	Clear	25.4	Brown/black	Earth	Loamy	<30	370	480	<30	<10	<10	0.16	*2	
91	Watarasegawa River	Shimatsudagawabashi Bridge	Ashikagashi City	2011/10/10	Sunny	23.1	Dark brown	Earth	Clay-loamy	<30	75	99	<30	<10	<10	0.13	*2	
92	Watarasegawa River	Tributary	Ashikagashi City	2011/10/11	Cloudy	20.8	Dark brown	Earth	Loamy	<30	170	160	<30	<10	<10	0.19	*2	
93	Watarasegawa River	Tributary	Ashikagashi City	2011/10/11	Sunny	22.0	Brown/black	Earth	Clay-loamy	<30	330	430	<30	<10	<10	0.15	*2	
94	Watarasegawa River	Nakabashi Bridge	Ashikagashi City	2011/10/11	Clear	18.6	Brown/black	Earth	Loamy	<30	99	120	<30	<10	<10	0.15	*2	
95	Watarasegawa River	Nukedo	Ashikagashi City	2011/10/11	Sunny	19.5	Brown/black	Earth	Clay-loamy	<30	100	130	<30	<10	<10	0.14	*2	
96	Watarasegawa River	Nukogawa Floodgate (tributary)	Ashikagashi City	2011/10/8	Clear	17.4	Brown/black	None	Loamy	<30	150	200	<30	<10	<10	0.10		
97	Hitagawa River	Lakadabashi Bridge	Sanoshi City	2011/10/8	Clear	21.2	Brown/black	None	Loamy	<30	71	110	<30	10	14	0.09		
98	Hitagawa River	Tributary	Ashikagashi City	2011/10/8	Clear	22.2	Brown/black	None	Loamy	<30	170	210	<30	<10	<10	0.08		
99	Hitagawa River	Tributary	Ashikagashi City	2011/10/8	Sunny	17.4	Brown/black	None	Loamy	<30	750	950	<30	32	37	0.11		
100	Yabagawa River	Yabagawa Floodgate (tributary)	Ashikagashi City	2011/10/10	Sunny	22.6	Brown/black	Earth	Loamy	<30	110	140	<30	<10	<10	0.06		
101	Watarasegawa River	Wataraseobashi Bridge	Fatebaya-shuku City	2011/10/10	Sunny	18.6	Brown/black	Earth	Loamy	<30	210	280	<30	<10	<10	0.07		
102	Shikawa River	Tributary	Sanoshi City	2011/10/10	Sunny	19.9	Dark olive brown	Earth	Loamy	<30	33	37	<30	<10	<10	0.06		
103	Watarasegawa River	Koyabashi Bridge (Sembai)	Sanoshi City	2011/10/14	Sunny	20.8	Brown/black	Earth	Loamy	<30	540	390	<30	<10	<10	0.19	*2	
104	Watarasegawa River	Horigomebashi Bridge	Sanoshi City	2011/10/14	Clear	20.8	Brown/black	Earth	Loamy	<30	170	250	<30	<10	<10	0.16	*2	
105	Watarasegawa River	Tributary	Sanoshi City	2011/10/10	Cloudy	18.0	Brown/black	Earth	Loamy	<30	79	96	<30	<10	12	0.06		
106	Watarasegawa River	Tributary	Sanoshi City	2011/10/14	Clear	18.4	Brown/black	Earth	Loamy	<30	240	270	<30	16	20	0.22	*2	
107	Watarasegawa River	Shunkabashi Bridge	Tochigashi City	2011/10/13	Cloudy	20.6	Brown/black	Earth	Clay-loamy	<30	220	310	<30	<10	<10	0.19	*2	

Note: *Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd. For points with *1 in the Remarks column, a survey meter, Model 3 of Ludlum Measurement Inc., and for those with *2, a Model 5000 of Health Physics Instruments was used.

Figures measured with either a Model 3 or a Model 5000 had a tendency to be a little higher than those measured with a TCS-172 or TCS-161 (about 1.6 times higher).

*Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

Lake and Headwater: 1st Water Quality Monitoring Results

Sampling point				Sampling date	Weather	Air temperature °C	Full depth m	Water quality													Remarks
No.	Water body	Point	Municipality					General items								Radioactive material concentrations (Bq/L)					
								Water temperature	Sampling depth m	Color	Odor	Secchi disk depth m	Electrical conductivity	SS mg/L	Turbidity	Radioactive iodine	Radioactive cesium Cs-134	Cs-137			
108	Nakagawa River System	Miyama Dam Reservoir Center	—	2011/10/24	Rain	14.0	14.3	12.4	0.5	Grayish yellow green	None	1.8	10.9	7	11	<1	<1	<1			
		1 m from the bottom	—	—	—	—	—	11.4	13.3	—	None	—	11.1	2	3	<1	<1	<1			
109		Shiobara Dam Reservoir Center	—	2011/10/17	Cloudy	18.0	22.7	15.7	0.5	Dark grayish yellow green	None	2.2	13.2	4	3	<1	<1	<1			
		1 m from the bottom	—	—	—	—	—	15.0	21.7	—	None	—	13.9	2	3	<1	<1	<1			
110		Ikari Dam Reservoir Center	—	2011/10/18	Sunny	17.0	62.0	16.3	0.5	Yellow green	None	3.5	4.8	1	2	<1	<1	<1			
		1 m from the bottom	—	—	—	—	—	13.7	61.0	—	None	—	4.6	15	25	<1	<1	<1			
111		Kawaji Dam Reservoir Center	—	2011/10/19	Cloudy	13.7	69.4	15.9	0.5	Grayish yellow green	None	0.8	4.6	7	10	<1	<1	<1			
		1 m from the bottom	—	—	—	—	—	15.3	68.4	—	None	—	5.4	160	220	<1	<1	<1			
112	Kinugawa River System	Kawamata Dam Reservoir Center	—	2011/10/19	Sunny	11.0	71.2	14.5	0.5	Grayish yellow green	None	1.2	5.3	5	8	<1	<1	<1			
		1 m from the bottom	—	—	—	—	—	14.4	70.2	—	None	—	4.9	12	19	<1	<1	<1			
113		Yunoko Lake Center	—	2011/10/18	Sunny	13.2	12.1	11.6	0.5	Dark green	Faint mold	3.7	14.6	2	2	<1	<1	<1			
		1 m from the bottom	—	—	—	—	—	9.5	11.1	—	None	—	15.5	2	3	<1	<1	<1			
114		Chuzenjiko Lake St-7	—	2011/10/18	Sunny	11.1	7.8	14.7	0.5	Green	None	6.3	9.8	1	1	<1	<1	<1			
		1 m from the bottom	—	—	—	—	—	14.9	6.8	—	None	—	9.8	1	1	<1	<1	<1			
115	—	Watarase Reservoir	—	2011/10/13	Cloudy	17.6	5.3	20.1	0.5	Yellow green	None	0.8	19.7	6	10	<1	<1	<1			
		1 m from the bottom	—	—	—	—	—	19.2	4.3	—	Faint mold	—	20.2	11	10	<1	<1	<1			

Note: Sampling points are listed from north to south.

Lake and Headwater: 1st Sediment Monitoring Results

Sampling point							Sediment																	Remarks					
No.	Water body	Point	Municipality	Sampling date	Weather	Air temperature	Full depth m	General items													Concentration of radioactive material								
								Mad temperature	Mad sampling depth cm	Color	Odor	Mechanical composition							Mad content	Soil particle density/cm ³	Property	Radioactive iodine-131	Radioactive cesium						
												Coarse gravel	Medium gravel	Fine gravel	Coarse sand	Medium sand	Fine sand	Silt					Clay	Cs-134	Cs-137				
108	Nakagawa River System	Miyama Dam Reservoir Center	—	2011/10/24	Rain	14.0	14.3	10.8	10	Olive black	hydrogen sulfide	—	—	—	—	—	—	—	0.2	1.2	53.6	45.0	40.9	2.587	Silt	<30	20	28	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
109		Shiobara Dam Reservoir Center	—	2011/10/17	Cloudy	18.0	22.7	14.6	3	Dark grayish yellow	Faint earth	—	—	—	0.4	0.0	0.8	16.6	62.8	19.4	36.5	2.605	Silt	<30	1,200	1,500	—	—	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
110		Ikari Dam Reservoir Center	—	2011/10/18	Sunny	17.0	62.0	12.4	10	Grayish olive	Faint earth	—	—	—	—	—	—	0.2	39.2	60.6	34.8	2.572	Silt	<30	1,900	2,500	—	—	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
111		Kawaji Dam Reservoir Center	—	2011/10/19	Cloudy	13.7	69.4	12.2	5	Dark olive brown	Faint earth	—	—	—	—	—	—	3.2	71.3	25.5	43.2	2.581	Silt	<30	430	490	—	—	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
112	Kinugawa River System	Kawamata Dam Reservoir Center	—	2011/10/19	Sunny	11.0	71.2	9.2	5	Olive black	Faint earth	—	—	—	3.0	0.1	0.0	1.4	34.9	60.6	29.0	2.589	Silt	<30	<10	<11	—	—	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
113		Yunoko Lake Center	—	2011/10/18	Sunny	13.2	12.1	9.1	10	Black	Faint hydrogen sulfide	—	—	—	—	—	—	0.8	27.2	72.0	18.6	2.558	Silt	<30	<10	<43	—	—	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
114		Chuzenjiko Lake St-7	—	2011/10/18	Sunny	11.1	7.8	14.6	5	Dark grayish yellow	Faint hydrogen sulfide	—	—	—	1.0	3.9	7.8	23.6	33.3	14.3	16.1	46.6	2.674	Gravel/silt with sand	<30	64	89	—	—
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
115	—	Watarase Reservoir	—	2011/10/13	Cloudy	17.6	5.3	19.4	10	Olive black	Faint earth	—	—	—	0.9	0.5	1.5	10.3	49.0	37.8	43.7	2.586	Silt	<30	91	160	—	—	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Note: Sampling points are listed from north to south.

Lake and Headwater: 1st Surrounding Environment (Lake Shore) Monitoring Results

Sampling point				Sampling date	Weather	Air temperature	Surrounding environment (soil/herb/air dose)										Remarks
No.	Water body	Point	Municipality				Soil			Herb			Air dose (μSv/h)				
							General items			Concentration of radioactive material (Bq/kg)				Concentration of radioactive material (Bq/kg)			
				Color	Odor	Property	Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137		Radioactive iodine	Radioactive cesium Cs-134 Cs-137						
108	Nakagawa River System	Miyama Dam Reservoir Center	—	2011/10/24	Rain	14.0	Black	Earth	Loamy	<30	670	860	—	—	—	0.31	*1
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
109	Shiobara Dam Reservoir	Center	—	2011/10/17	Cloudy	18.0	Brownish black	Earth	Clay-loamy	<30	1,500	1,900	—	—	—	0.74	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
110	Ikari Dam Reservoir	Center	—	2011/10/18	Sunny	17.0	Dark grayish yellow	Earth	Sandy	<30	650	790	—	—	—	0.32	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
111	Kawaji Dam Reservoir	Center	—	2011/10/19	Cloudy	13.7	Dark brown	Earth	Loamy	<30	1,500	1,800	—	—	—	0.52	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
112	Kinugawa River System	Kawamata Dam Reservoir Center	—	2011/10/19	Sunny	11.0	Dark grayish yellow	Earth	Sandy	<30	180	210	—	—	—	0.09	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
113	Yunoko Lake	Center	—	2011/10/18	Sunny	13.2	Olive brown	None	Sandy	<30	110	150	—	—	—	0.17	*1
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
114	Chuzenjiko Lake	St-7	—	2011/10/18	Sunny	11.1	Brownish black	None	Loamy	<30	380	470	—	—	—	0.22	*1
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
115	—	Watarase Reservoir	—	2011/10/13	Cloudy	17.6	Brownish black	Earth	Loamy	<30	160	180	<30	<10	<10	0.15	*2
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Note: * Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd. For points with *1 in the Remarks column, a survey meter, Model 3 of Ludlum Measurement Inc., and for those with *2, a Model 5000 of Health Physics Instruments was used.

Figures measured with either a Model 3 or a Model 5000 had a tendency to be a little higher than those measured with a TCS-172 or TCS-161 (about 1.6 times higher).

* Sampling points are listed from north to south.

River: 2nd Surrounding Environment (River Terrace (Left Bank)) Monitoring Results

No.	Sampling point			Sampling date	Weather	Air temperature °C	Surrounding environment (soil and air dose)						Remarks		
							Left bank							Air dose (μSv/h)	
							Soil			Radioactive material concentrations					
							General items			Radioactive iodine	Radioactive cesium				
Color	Odor	Property	I-131	Cs-134	Cs-137										
2	Nakagawa River System	Nakagawa River	Ikuvobashishita	Nasushoharashi City	2012/2/22	Clear	5.2	—	—	—	—	—	—		
3		Nakagawa River	Komeibashi Bridge	Nasushoharashi City	2012/2/22	Clear	5.4	Brownish black	Faint earth	Loamy	<30	2,500	3,500	0.36	
4		Takaomatagawa River	Takaomatabashi Bridge	Nasumachi Town	2012/2/22	Clear	6.5	Brownish black	Faint earth	Loamy	<30	3,100	4,300	0.41	
5		Yukawa River	Yukawabashi Bridge	Nasumachi Town	2012/2/22	Clear	5.0	Brownish black	Faint earth	Loamy	<30	1,100	1,500	0.38	
6		Nakagawa River	Kamikuroiso	Nasushoharashi City	2012/2/23	Rain	3.8	—	—	—	—	—	—	—	Surrounding environment (left bank): Unable to collect soil and measure air dose due to increased water level
7		Yosagawa River	Yosabashi Bridge	Nasumachi Town	2012/2/22	Sunny	5.4	Brownish black	Faint green grass	Loamy	<30	2,200	3,200	0.59	
8		Kurokawa River	Shindenbashi Bridge	Nasumachi Town	2012/2/23	Rain	5.2	Brownish black	Faint green grass	Loamy	<30	7,500	10,000	0.73	
9		Yosagawa River	Kawadabashi Bridge	Otarashi City	2012/2/23	Rain	5.8	Brownish black	Faint earth	Loamy	<30	1,700	2,400	0.39	
10		Nakagawa River	Kurobane	Otarashi City	2012/2/23	Cloudy	8.8	Black	Faint earth	Loamy	<30	700	1,000	0.22	
11		Matsuhagawa River	Tributary	Otarashi City	2012/2/23	Cloudy	7.4	Dark olive brown	Faint earth	Loamy	<30	450	600	0.21	
12		Sabigawa River	Udagawabashi Bridge	Otarashi City	2012/2/28	Cloudy	5.5	Brownish black	Faint earth	Loamy	<30	200	260	0.15	
13		Momuragawa River	Momuranakabashi Bridge	Otarashi City	2012/2/24	Sunny	12.6	Brownish black	Faint earth	Loamy	<30	2,900	3,800	0.22	
14		Hokigawa River	Yunohara	Nasushoharashi City	2012/2/28	Cloudy	1.5	Dark brown	Faint earth	Clay-loamy	<30	240	370	0.26	Surrounding environment (right bank): Unable to collect soil and measure air dose due to much snow on the river bank
15		Hokigawa River	Sekibabashi Bridge	Nasushoharashi City	2012/2/29	Snow	1.0	Brownish black	Faint earth	Clay-loamy	<30	1,700	2,400	0.76	
16		Hokigawa River	Iwabashi Bridge	Otarashi City	2012/2/24	Sunny	11.0	Brownish black	Faint earth	Loamy	<30	270	380	0.17	
17		Hokigawa River	Hokigawabashi Bridge	Otarashi City	2012/2/23	Cloudy	11.2	Brownish black	Faint green grass	Loamy	<30	690	920	0.18	
18		Nakagawa River	Shinnakabashi Bridge	Nakagawamachi Town	2012/2/24	Sunny	8.2	Brownish black	Faint earth	Loamy	<30	120	190	0.11	
19		Mumogawa River	Kosebashi Bridge	Nakagawamachi Town	2012/2/24	Sunny	10.2	Brownish black	Faint earth	Loamy	<30	150	190	0.13	
20		Arakawa River	Sakachibashi Bridge	Shioyama City	2012/2/22	Sunny	11.2	Brownish black	None	Loamy	<30	410	620	0.19	
21		Arakawa River	Renjohashi Bridge	Sakurashi City	2012/2/22	Sunny	10.5	Brownish black	None	Loamy	<30	240	330	0.12	
22		Uchikawa River	Tanabashi Bridge	Yatashi City	2012/2/22	Sunny	6.4	Brownish black	None	Loamy	<30	220	360	0.18	
23		Uchikawa River	Asahibashi Bridge	Sakurashi City	2012/2/22	Sunny	6.6	Dark brown	None	Loamy	<30	330	460	0.13	
24		Arakawa River	Mukadabashi Bridge	Nasukarasyamashi City	2012/2/23	Rain	5.9	Brownish black	None	Loamy	<30	110	150	0.11	
25		Egawa River	Tributary	Nasukarasyamashi City	2012/2/23	Rain	6.1	Brownish black	None	Loamy	<30	160	220	0.11	
35		Tonegawa River System	Kinugawa River	Kawaji Daichi Power Station, front	Nikkoshi City	2012/2/27	Sunny	-0.8	Brownish black	Faint earth	Loamy	<30	570	800	0.22
37	Onkagawa River		Tributary	Nikkoshi City	2012/2/27	Cloudy	0.4	Grayish olive	None	Sandy	<30	17	33	0.14	
38	Kinugawa River		Kosagoe	Nikkoshi City	2012/2/24	Sunny	1.2	Brownish black	None	Loamy	<30	1,200	1,800	0.29	
39	Iaanagawa River		Tributary	Nikkoshi City	2012/2/24	Sunny	6.2	Brownish black	None	Clay-loamy	<30	750	1,000	0.41	
41	Daivagawa River		Shinkyo Bridge	Nikkoshi City	2012/2/26	Cloudy	4.1	—	—	—	—	—	—	—	
42	Shidobuchigawa River		Sujichigabashi Bridge	Nikkoshi City	2012/2/26	Cloudy	5.4	Black	Faint earth	Loamy	<30	1,100	1,500	0.25	
43	Daivagawa River		Kashimbashi Bridge (Harigai)	Nikkoshi City	2012/2/22	Sunny	3.8	Brownish black	None	Loamy	<30	640	870	0.28	
44	Kinugawa River		Sanuki	Shioyama City	2012/2/22	Sunny	5.8	Dark brown	None	Loamy	<30	320	460	0.20	
45	Nishikinugawa River		Nishikinugawabashi Bridge	Utsunomiyashi City	2012/2/23	Rain	5.8	Black	None	Loamy	<30	88	130	0.10	
46	Kinugawa River		(Kinugawabashi Bridge (Hoshokuj Temple))	Utsunomiyashi City	2012/2/23	Rain	5.6	Brownish black	None	Loamy	<30	75	100	0.10	
47	Kinugawa River		Daidoizumbashi Bridge	Mookashi City	2012/2/21	Sunny	7.8	Brownish black	Faint earth	Loamy	<30	410	580	0.11	
50	Egawa River		Tributary	Shimotsukeshi City	2012/2/21	Sunny	6.6	Black	Faint earth	Loamy	<30	250	370	0.11	
51	Akaborigawa River		Nikko City Hall, front	Nikkoshi City	2012/2/24	Sunny	9.2	—	—	—	—	—	—	—	
52	Akaborigawa River		Kiwadama	Nikkoshi City	2012/2/24	Sunny	8.1	Brownish black	None	Loamy	<30	500	650	0.15	
54	Tagawa River		Ozobashi Bridge	Utsunomiyashi City	2012/2/23	Cloudy	8.8	Black	None	Loamy	<30	330	420	0.08	
56	Kamagawa River		Tsukushibashi Bridge	Utsunomiyashi City	2012/2/23	Cloudy	9.2	Black	None	Loamy	<30	2,600	3,600	0.09	
58	Tagawa River		Meihibashi Bridge	Kanumashi City	2012/2/21	Sunny	11.2	Brownish black	Faint earth	Loamy	<30	100	120	0.09	
60	Tagawa River		Yanabashi Bridge	Ovamashi City	2012/2/21	Clear	8.5	Black	Faint earth	Loamy	<30	73	110	0.09	
73	Kurokawa River		Kanumabashi Bridge	Kanumashi City	2012/2/20	Clear	10.4	Brownish black	Faint earth	Loamy	<30	65	93	0.10	
74	Kurokawa River		Onaribashi Bridge	Mibumashi Town	2012/2/20	Clear	9.4	Dark olive/black	Faint earth	Loamy	<30	120	150	0.12	
75	Omoigawa River		Akaishibashi Bridge	Kanumashi City	2012/2/20	Clear	9.4	Brownish black	Faint earth	Loamy	<30	64	120	0.11	
76	Koyabugawa River		Koyabubashi Bridge	Kanumashi City	2012/2/20	Clear	8.8	Black	Earth	Loamy	<30	120	160	0.10	
77	Omoigawa River		Tamotsubashi Bridge	Tochigishi City	2012/2/20	Clear	10.4	Black	Faint earth	Loamy	<30	82	110	0.09	
79	Omoigawa River		Otomeobashi Bridge	Ovamashi City	2012/2/21	Clear	2.6	Brownish black	None	Loamy	<30	170	250	0.12	
85	Uzumagawa River		Uzumabashi Bridge	Tochigishi City	2012/2/24	Sunny	13.7	Brownish black	Faint green grass	Loamy	<30	140	190	0.11	
87	Watarasegawa River	Watarasegawa River intake near a Sewerage Station	Nikkoshi City	2012/2/26	Cloudy	4.0	—	—	—	—	—	—	—	0.23	
90	Watarasegawa River	Hajikabashi Bridge	Ashikagashi City	2012/2/22	Clear	10.4	Black	Faint earth	Loamy	<30	190	270	0.08		
94	Watarasegawa River	Nakabashi Bridge	Ashikagashi City	2012/2/22	Clear	12.6	Dark brown	Faint earth	Loamy	<30	130	170	0.09		
101	Watarasegawa River	Wataraseobashi Bridge	Fatebayashishi City	2012/2/22	Cloudy	8.3	Dark brown	Faint earth	Loamy	<30	18	26	0.10		
107	Watarasegawa River	Shinkaribashi Bridge	Tochigishi City	2012/2/22	Cloudy	6.9	Brownish black	Faint earth	Loamy	<30	76	110	0.11		

Note: Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd.

Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

River: 2nd Surrounding Environment (River Terrace (Right Bank)) Monitoring Results

No.	Sampling point			Sampling date	Weather	Air temperature	Surrounding environment (soil and air dose)						Remarks			
							Right bank							Air dose (μSv/h)		
							Soil			Radioactive material concentrations (Bq/kg (dry))						
							General items			Radioactive cesium						
Color	Odor	Property	Radioactive iodine-131	Radioactive cesium Cs-134 Cs-137												
2	Nakagawa River System	Nakagawa River	Ikuvobashishita	Nasushiobarashi City	2012/2/22	Clear	5.2	Dark olive brown	Faint earth	Loamy	<30	1,100	1,500	0.18		
3		Nakagawa River	Komeibashi Bridge	Nasushiobarashi City	2012/2/22	Clear	5.4	Dark olive brown	Faint green grass	Loamy	<30	3,200	4,500	0.38		
4		Takaomatagawa River	Takaomatabashi Bridge	Nasumachi Town	2012/2/22	Clear	6.5	Black	Faint earth	Loamy	<30	2,500	3,400	0.36		
5		Yukawa River	Yukawabashi Bridge	Nasumachi Town	2012/2/22	Clear	5.0	Brownish black	Faint earth	Loamy	<30	1,400	2,000	0.37		
6		Nakagawa River	Kamikuroiso	Nasushiobarashi City	2012/2/23	Rain	3.8	Brownish black	Faint green grass	Loamy	<30	790	1,000	0.34	Surrounding environment (left bank): Unable to collect soil and measure air dose due to increased water level	
7		Yosagawa River	Yosabashi Bridge	Nasumachi Town	2012/2/22	Sunny	5.4	Brownish black	Faint green grass	Loamy	<30	3,900	5,400	0.42		
8		Kurokawa River	Shindenbashi Bridge	Nasumachi Town	2012/2/23	Rain	5.2	Brownish black	Faint green grass	Loamy	<30	2,700	3,700	0.57		
9		Yosagawa River	Kawadabashi Bridge	Otarashi City	2012/2/23	Rain	5.8	Brownish black	Faint earth	Loamy	<30	1,800	2,600	0.43		
10		Nakagawa River	Kurobane	Otarashi City	2012/2/23	Cloudy	8.8	Black	Faint green grass	Loamy	<30	500	660	0.18		
11		Matsubagawa River	Tributary	Otarashi City	2012/2/23	Cloudy	7.4	Brownish black	Faint earth	Loamy	<30	370	510	0.19		
12		Sabigawa River	Udagawabashi Bridge	Otarashi City	2012/2/28	Cloudy	5.5	Brownish black	Faint earth	Loamy	<30	440	580	0.13		
13		Momuragawa River	Momuranakabashi Bridge	Otarashi City	2012/2/24	Sunny	12.6	Black	Faint earth	Loamy	<30	580	840	0.19		
14		Hokigawa River	Yunohara	Nasushiobarashi City	2012/2/28	Cloudy	1.5	—	—	—	<30	—	—	—	Surrounding environment (right bank): Unable to collect soil and measure air dose due to much snow on the river bank.	
15		Hokigawa River	Sekibashi Bridge	Nasushiobarashi City	2012/2/29	Snow	1.0	Black	Faint earth	Clay-loamy	<30	1,100	1,500	0.75		
16		Hokigawa River	Iwabashi Bridge	Otarashi City	2012/2/24	Sunny	11.0	Black	Faint green grass	Loamy	<30	610	840	0.19		
17		Hokigawa River	Hokigawabashi Bridge	Otarashi City	2012/2/23	Cloudy	11.2	Brownish black	Faint green grass	Loamy	<30	350	500	0.15		
18		Nakagawa River	Shinnakabashi Bridge	Nakagawamachi Town	2012/2/24	Sunny	8.2	Brownish black	Faint earth	Loamy	<30	150	240	0.13		
19		Mumogawa River	Kosetabashi Bridge	Nakagawamachi Town	2012/2/24	Sunny	10.2	Brownish black	Faint earth	Loamy	<30	210	300	0.12		
20		Arakawa River	Saikachibashi Bridge	Shioyama City	2012/2/22	Sunny	11.2	Brownish black	None	Loamy	<30	750	1,000	0.19		
21		Arakawa River	Renjibashi Bridge	Sakurashi City	2012/2/22	Sunny	10.5	Brownish black	None	Loamy	<30	130	180	0.13		
22		Uchikawa River	Tanakabashi Bridge	Yaitashi City	2012/2/22	Sunny	6.4	Brownish black	None	Loamy	<30	330	400	0.19		
23		Uchikawa River	Asahibashi Bridge	Sakurashi City	2012/2/22	Sunny	6.6	Brownish black	None	Loamy	<30	120	190	0.10		
24		Arakawa River	Mukadabashi Bridge	Nasukarasuyama City	2012/2/23	Rain	5.9	Brownish black	None	Loamy	<30	150	200	0.12		
25		Egawa River	Tributary	Nasukarasuyama City	2012/2/23	Rain	6.1	Brownish black	None	Loamy	<30	82	100	0.10		
35		Tonogawa River System	Kinugawa River	Kawaji Daichi Power Station, front	Nikkoshi City	2012/2/27	Sunny	-0.8	Brownish black	Faint earth	Loamy	<30	150	190	0.22	
37	Oikagawa River		Tributary	Nikkoshi City	2012/2/27	Cloudy	0.4	Dark green yellow	None	Sandy	<30	550	760	0.25		
38	Kinugawa River		Kosagoe	Nikkoshi City	2012/2/24	Sunny	1.2	Brownish black	None	Loamy	<30	850	1,100	0.29		
39	Iaanagawa River		Tributary	Nikkoshi City	2012/2/24	Sunny	6.2	Brownish black	None	Loamy	<30	850	1,200	0.33		
41	Daiyagawa River		Shinkyo Bridge	Nikkoshi City	2012/2/26	Cloudy	4.1	Brownish black	Faint earth	Loamy	<30	470	680	0.17		
42	Shidobuchigawa River		Sujichigabashi Bridge	Nikkoshi City	2012/2/26	Cloudy	5.4	Black	Faint earth	Loamy	<30	1,900	2,700	0.24		
43	Daiyagawa River		Kaishinbashi Bridge (Harigai)	Nikkoshi City	2012/2/22	Sunny	3.8	Brownish black	None	Loamy	<30	1,000	1,300	0.31		
44	Kinugawa River		Sanuki	Shioyama City	2012/2/22	Sunny	5.8	Black	None	Loamy	<30	1,100	1,500	0.27		
45	Nishikinugawa River		Nishikinugawabashi Bridge	Utsumomyashi City	2012/2/23	Rain	5.8	Brownish black	None	Loamy	<30	110	150	0.11		
46	Kinugawa River		Kinugawabashi Bridge (Hoshakuji Temple)	Utsumomyashi City	2012/2/23	Rain	5.6	Brownish black	None	Loamy	<30	94	120	0.13		
47	Kinugawa River		Daidoizumbashi Bridge	Mookashi City	2012/2/21	Sunny	7.8	Brownish black	Faint earth	Loamy	<30	510	690	0.14		
50	Egawa River		Tributary	Shimotsakeshi City	2012/2/21	Sunny	6.6	Dark brown	Faint earth	Loamy	<30	58	71	0.11		
51	Akaborigawa River		Nikko City Hall, front	Nikkoshi City	2012/2/24	Sunny	9.2	Black	None	Loamy	<30	460	640	0.21		
52	Akaborigawa River		Kiwadajima	Nikkoshi City	2012/2/24	Sunny	8.1	Brownish black	None	Loamy	<30	750	1,000	0.16		
54	Tagawa River		Ozobashi Bridge	Utsumomyashi City	2012/2/23	Cloudy	8.8	—	—	—	<30	—	—	—		
56	Kamagawa River		Tsukushibashi Bridge	Utsumomyashi City	2012/2/23	Cloudy	9.2	Brownish black	None	Loamy	<30	240	330	0.08		
58	Tagawa River		Meijibashi Bridge	Kaminokawamachi Town	2012/2/21	Sunny	11.2	Brownish black	Faint earth	Loamy	<30	140	200	0.09		
60	Tagawa River		Yanabashi Bridge	Ovamashi City	2012/2/21	Clear	8.5	Brownish black	Faint earth	Loamy	<30	43	73	0.08		
73	Watarasegawa River System		Kurokawa River	Kaijimbashi Bridge	Kanumashi City	2012/2/20	Clear	10.4	Brownish black	Faint earth	Loamy	<30	71	120	0.09	
74			Kurokawa River	Onaribashi Bridge	Mibumachi Town	2012/2/20	Clear	9.4	Brownish black	Faint earth	Loamy	<30	11	21	0.10	
75			Oshigawa River	Akaishibashi Bridge	Kanumashi City	2012/2/20	Clear	9.4	Brownish black	Faint earth	Loamy	<30	270	360	0.11	
76			Koyabagawa River	Kovabubashi Bridge	Kanumashi City	2012/2/20	Clear	8.8	Black	Earth	Loamy	<30	130	170	0.12	
77			Omoigawa River	Tamotsubashi Bridge	Tochigishi City	2012/2/20	Clear	10.4	Olive black	Faint earth	Loamy	<30	87	120	0.10	
79			Omoigawa River	Otomohashi Bridge	Ovamashi City	2012/2/21	Clear	2.6	Dark olive/black	Faint earth	Loamy	<30	100	130	0.10	
85			Uzumagawa River	Uzumabashi Bridge	Tochigishi City	2012/2/24	Sunny	13.7	Brownish black	Faint green grass	Loamy	<30	100	150	0.11	
87		Watarasegawa River	Watarasegawa River intake weir at Sen Power Station	Nikkoshi City	2012/2/26	Cloudy	4.0	Brownish black	None	Sandy	<30	24	38	0.22		
90		Watarasegawa River	Hajikabashi Bridge	Ashikagashi City	2012/2/22	Clear	10.4	Brownish black	Faint earth	Loamy	<30	220	300	0.10		
94		Watarasegawa River	Nakabashi Bridge	Ashikagashi City	2012/2/22	Clear	12.6	Dark brown	Faint earth	Loamy	<30	64	84	0.09		
101	Watarasegawa River	Wataraseohashi Bridge	Fatebayashi City	2012/2/22	Cloudy	8.3	Brownish black	Faint earth	Loamy	<30	73	100	0.12			
107	Watarasegawa River	Shinkabashi Bridge	Tochigishi City	2012/2/22	Cloudy	6.9	Brownish black	Faint earth	Loamy	<30	94	140	0.11			

Note: *Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd.

*Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

Lake and Headwater: 2nd Water Quality Monitoring Results

Sampling point				Sampling date	Weather	Air temperature	Full depth m	Water quality											Remarks
No.	Water body	Point	Municipality					General items							Radioactive material concentrations (Bq/L)				
								Water temperature	Sampling depth	Color	Odor	Secchi disk depth	Water turbidity	SS mg/L	Turbidity	Radioactive iodine-131	Radioactive cesium		
												Cs-134	Cs-137						
109	Nakagawa River System	Shiobara Dam Reservoir Center	—	2012/2/29	Snow	0.8	35.7	2.8	0.5	Dark green	None	2.5	23.8	1	2.1	<1	<1	<1	
		1 m from the bottom	—	—	—	—	—	3.8	34.7	—	None	—	24.2	1	2.3	<1	<1	<1	
110	Kinugawa River System	Ikari Dam Reservoir Center	—	2012/2/28	Clear	-2.2	69.0	2.1	0.5	Dark green	None	5.4	8.1	1	1.3	<1	<1	<1	
		1 m from the bottom	—	—	—	—	—	3.3	68.0	—	None	—	8.3	1	2.4	<1	<1	<1	
111	Kinugawa River System	Kawaji Dam Reservoir Center	—	2012/2/28	Clear	5.6	80.5	4.8	0.5	Yellow green	None	2.4	7.6	1	3.2	<1	<1	<1	
		1 m from the bottom	—	—	—	—	—	4.8	79.5	—	None	—	7.6	2	3.3	<1	<1	<1	
112	Kinugawa River System	Kawamata Dam Reservoir Center	—	2012/2/27	Sunny	-5.8	71.2	1.8	0.5	Dark green	None	4.3	10.3	1	1.4	<1	<1	<1	
		1 m from the bottom	—	—	—	—	—	2.9	70.2	—	None	—	11.0	3	4.4	<1	<1	<1	

Note: Sampling points are listed from north to south.

Lake and Headwater: 2nd Sediment Monitoring Results

Sampling point				Sampling date	Weather	Air temperature	Full depth m	Sediment																	Remarks	
No.	Water body	Point	Municipality					General items											Radioactive material concentrations							
								Moisture content	Moist sampling depth (cm)	Color	Odor	Coarse gravel	Medium gravel	Fine gravel	Coarse sand	Medium sand	Fine sand	Silt	Clay	Mud content	Soil particle density (g/cm ³)	Property	Radioactive iodine	Radioactive cesium		
109	Nakagawa River System	Shiobara Dam Reservoir Center	—	2012/2/29	Snow	0.8	35.7	3.8	10	Brownish black	Faint rotten plant	—	—	—	—	—	0.4	6.4	71.5	21.7	34.3	2.587	Silt	<30	660	930
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
110	Kinugawa River System	Ikari Dam Reservoir Center	—	2012/2/28	Clear	-2.2	69.0	3.5	10	Gray	Faint earth	—	—	—	—	—	—	0.3	40.9	58.8	33.5	2.544	Silt	<30	2,800	3,900
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
111	Kinugawa River System	Kawaji Dam Reservoir Center	—	2012/2/28	Clear	5.6	80.5	4.8	10	Brownish black	None	—	—	—	—	—	—	1.0	57.4	41.6	47.7	2.562	Silt	<30	260	350
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
112	Kinugawa River System	Kawamata Dam Reservoir Center	—	2012/2/27	Sunny	-5.8	71.2	2.9	5	Olive black	None	—	—	1.0	0.0	0.0	2.0	33.4	63.6	29.1	2.567	Silt	<30	66	110	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

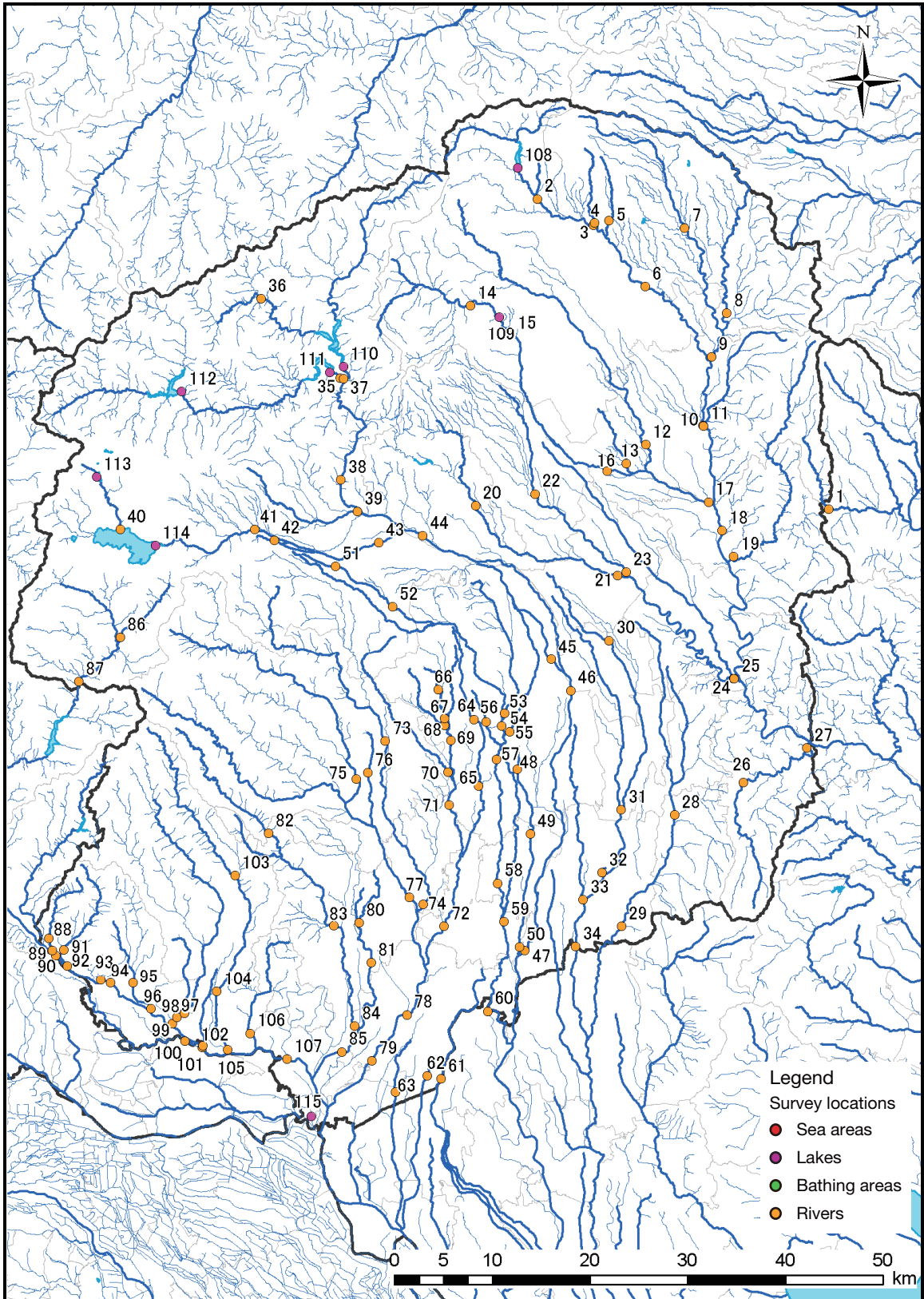
Note: Sampling points are listed from north to south.

Lake and Headwater: 2nd Surrounding Environment (Lake Shore) Monitoring Results

Sampling point				Sampling date	Weather	Air temperature	Surrounding environment (soil and air dose)						Remarks	
No.	Water body	Point	Municipality				Soil			Radioactive material concentrations				Air dose (μSv/h)
							Color	Odor	Property	Radioactive iodine-131	Cs-134	Cs-137		
109	Nakagawa River System	Shiobara Dam Reservoir Center	—	2012/2/29	Snow	0.8	Dark olive brown	Faint earth	Loamy	<30	3,800	5,300	0.50	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	
110	Kinugawa River System	Ikari Dam Reservoir Center	—	2012/2/28	Clear	-2.2	Dark olive brown	Faint earth	Loamy	<30	1,900	2,700	0.25	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	
111	Kinugawa River System	Kawaji Dam Reservoir Center	—	2012/2/28	Clear	5.6	Brownish black	Faint earth	Loamy	<30	5,400	7,400	0.40	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	
112	Kinugawa River System	Kawamata Dam Reservoir Center	—	2012/2/27	Sunny	-5.8	—	—	—	—	—	—	—	
		1 m from the bottom	—	—	—	—	—	—	—	—	—	—	—	

Note: Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd.

• Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.



Survey Locations (Tochigi Prefecture)